Nuclear Instruments and Methods in Physics Research B69 (1992) 525–530
North-Holland

NIM B
Beam Interactions with Materials & Atoms

Author index

Abbundi, R.J., see Chakrabarti, K. B69 (1992) 322
Achiba, Y., see Watanabe, N. B69 (1992) 385
Alexiev, D., K.S.A. Butcher and T.L. Tansley, Neutron transmutation doping of silicon for the production of radiation detectors B69 (1992) 510
Alimov, R., R.R. Gulamova and E.M. Gasanov, Study of optical and electrophysical characteristics of cerium-containing glasses B69 (1992) 327
Alkhazov, G.D., A.E. Barzakh, V.P. Denisov, K.A. Mezilev, Yu.N. Novikov, V.N. Panteleyev, A.V. Popov, E.P. Sudentas, V.S. Letokhov, V.I. Mishin, V.N. Fedoseyev, S.V. Andreyev, D.S. Vedeneyev and A.D. Zyuzikov, A new highly efficient method of atomic spectroscopy for nuclides far from stability B69 (1992) 517
Andreo, P., see Medin, J. B69 (1992) 64
Andreyev, S.V., see Alkhazov, G.D. B69 (1992) 517
Aoki, A., see Ogawa, H. B69 (1992) 108
Arnau, A., M. Peñalba, P.M. Echenique and F. Flores, A charge state approach to the stopping power of ions in solids B69 (1992) 102
Arnau, A., see Närmann, A. B69 (1992) 158
Assoufid, L. and V.O. Kostroun, External ion injection into an electron beam ion source B69 (1992) 492

Baier, V.N., V.M. Katkov and V.M. Strakhovenko, Hard proton emission from high energy electrons and positrons in single crystals B69 (1992) 258
Balashova, L.L., see Trikalinos, Ch. B69 (1992) 94
Baranov, V.I., see Denisov, A.S. B69 (1992) 382
Barzakh, A.E., see Alkhazov, G.D. B69 (1992) 517
Baschenko, O.A., see Blokhin, S.M. B69 (1992) 474
Bauer, P., W. Rössler and P. Mertens, Stopping of hydrogen ions in oxides: influence of the chemical bond .. B69 (1992) 46
Betz, H.-D., see Schramm, R. B69 (1992) 123
Bimbot, R., Compilation, measurements and tabulation of heavy ion stopping data B69 (1992) 1
Blokhin, S.M., A.A. Vlasov and O.A. Baschenko, Restoration of depth profiles of impurity atoms in solids based on yields of ion-excited X-rays B69 (1992) 474
Brecht, E., see Rauschenbach, B. B69 (1992) 277
Brice, D.K., Screened Rutherford multiple scattering estimates for heavy ion backscattering applications B69 (1992) 349
Butcher, K.S.A., see Alexiev, D. B69 (1992) 510

Caridi, A., see Valković, O. B69 (1992) 479
Cereda, E., see Valković, O. B69 (1992) 479
Chakarov, I.R., S.S. Todorov and D.S. Karpuzov, Dynamic Monte-Carlo simulation of compositional change and atomic redistribution in multicomponent targets under ion bombardment B69 (1992) 193
Chakrabarti, K., J. Sharma, V.K. Mathur and R.J. Abbundi, X-ray photoelectron spectroscopy, optical absorption and thermoluminescence studies in $CaSO_4$:Tm B69 (1992) 322
Chartier, P., see Jaouen, M. B69 (1992) 287
Cherubini, R., see Valković, O. B69 (1992) 479
Chesnokov, Yu.A., N.A. Galyaev, V.I. Kotov, S.V. Tsarik and V.N. Zapolsky, 70 GeV proton volume capture into channeling mode with a bent Si single crystal B69 (1992) 247
Chesnokov, Yu.A., see Denisov, A.S. B69 (1992) 382
Ćirić, D., see Heeren, R.M.A. B69 (1992) 389
Conrad, U., see Urbassek, H.M. B69 (1992) 413
Czerbniak, J., see Moneta, M. B69 (1992) 146

Danilin, A.B., Yu.N. Erokhin, V.N. Mordkovich, N. Hatzopoulos and P.L.F. Hemment, Athermal nature of impact exerted by ultraviolet radiation on the accumulation of radiation defects during ion implantation into silicon B69 (1992) 268
Denisov, A.S., O.L. Fedin, M.A. Gordeeva, M.P. Gur'ev, Yu.P. Platanov, A.I. Schetkovsky, V.V. Skorobogatov, A.I. Smirnov, V.I. Baranov, Yu.A. Chesnokov, V.V. Dudenko, N.A. Galyaev, V.I. Kotov, S.V. Tsarik and V.N. Zapolsky, First results from a study of a 70 GeV proton beam being focused by a bent crystal ... B69 (1992) 382

0168-583X/92/$05.00 © 1992 – Elsevier Science Publishers B.V. All rights reserved

Denisov, V.P., see Alkhazov, G.D. B69 (1992) 517
Drijard, D., see Muñoz, R.C. B69 (1992) 293
Dudenko, V.V., see Denisov, A.S. B69 (1992) 382

Echenique, P.M., see Arnau, A. B69 (1992) 102
Efimov, V.G., see Erchak, D.P. B69 (1992) 271
Efimov, V.G., see Erchak, D.P. B69 (1992) 443
Eppacher, Ch. and D. Semrad, Dependence of proton and helium energy loss in solids upon plasma properties B69 (1992) 33
Erchak, D.P., A.G. Ulyashin, R.B. Gelfand, N.M. Penina, A.M. Zaitsev, V.S. Varichenko, V.G. Efimov and V.F. Stelmakh, Hydrogen passivation of the paramagnetic centers in amorphous regions of ion-implanted diamond B69 (1992) 271
Erchak, D.P., V.G. Efimov, A.M. Zaitsev, V.F. Stelmakh, N.M. Penina, V.S. Varichenko and V.P. Tolstykh, Peculiarities of damage in diamond irradiated by high energy ions B69 (1992) 443
Erokhin, Yu.N., see Danilin, A.B. B69 (1992) 268

Fassett, J.D. and W.R. Kelly, Determination of uranium and thorium in materials associated with real time electronic solar neutrino detectors B69 (1992) 503
Fedin, O.L., see Denisov, A.S. B69 (1992) 382
Fedoseyev, V.N., see Alkhazov, G.D. B69 (1992) 517
Ferrando, A., see Muñoz, R.C. B69 (1992) 293
Fischer, V., see Gaynor, J. B69 (1992) 332
Flores, F., see Arnau, A. B69 (1992) 102
Franke, H., see Närmann, A. B69 (1992) 158
Fukuzawa, F., see Ogawa, H. B69 (1992) 108

Gades, H. and H.M. Urbassek, Pair versus many-body potentials in atomic emission processes from a Cu surface B69 (1992) 232
Galyaev, N.A., see Chesnokov, Yu.A. B69 (1992) 247
Galyaev, N.A., see Denisov, A.S. B69 (1992) 382
Gasanov, E.M., see Alimov, R. B69 (1992) 327
Gaynor, J., V. Fischer, J.K. Walker and J.P. Harmon, Miscible blends of fluorocarbon copolymer with acrylic copolymer and poly(vinyl acetate), PVAc: new alternatives to low refractive index cladding materials B69 (1992) 332
Geissel, H., see Lennard, W.N. B69 (1992) 89
Gelfand, R.B., see Erchak, D.P. B69 (1992) 271
Gerward, L., Theoretical upper and lower limits to experimental X-ray attenuation coefficients B69 (1992) 407
Ghosh, J.K., see Shriwastwa, B.B. B69 (1992) 370
Girardeau, T., see Jaouen, M. B69 (1992) 287
Golser, R. and D. Semrad, Energy loss of hydrogen and helium ions in hydrogen and helium gas: looking for exceptions from velocity proportionality B69 (1992) 18
Gordeeva, M.A., see Denisov, A.S. B69 (1992) 382
Grande, P.L., see Schiwietz, G. B69 (1992) 10
Groeneveld, K.-O., see Rothard, H. B69 (1992) 154
Grötschel, R., see Rauschenbach, B. B69 (1992) 277
Gulamova, R.R., see Alimov, R. B69 (1992) 327
Gur'ev, M.P., see Denisov, A.S. B69 (1992) 382
Guy, L.P., R.B. Taylor and I.B. Whittingham, Incoherent scattering function at small momentum transfers .. B69 (1992) 174
Gwizdałła, T., see Moneta, M. B69 (1992) 146

Hafez, A.F. and M.A. Naim, Plastic nuclear track detection methods for estimation of thorium to uranium ratio in thick natural materials B69 (1992) 373
Haque, A.M.I., see Valković, O. B69 (1992) 479
Harmon, J.P., see Gaynor, J. B69 (1992) 332
Haruyama, Y., see Ogawa, H. B69 (1992) 108
Hass, M., see Zinamon, Z. B69 (1992) 127
Hatzopoulos, N., see Danilin, A.B. B69 (1992) 268
Hautala, M., see Koponen, I. B69 (1992) 182
Heeren, R.M.A., D. Ćirić, S. Yagura, H.J. Hopman and A.W. Kleyn, Sputtering of a hydrogenated barium surface in a negative ion surface conversion source B69 (1992) 389
Heiland, W., see Närmann, A. B69 (1992) 158
Hemment, P.L.F., see Danilin, A.B. B69 (1992) 268

Henschel, H., O. Köhn and H.U. Schmidt , Optical fibres as radiation dosimeters B69 (1992) 307
Hopman, H.J., see Heeren, R.M.A. B69 (1992) 389

Ikegami, H., see Ogawa, H. B69 (1992) 108
Ikeyama, M., see Miyagawa, S. B69 (1992) 437
Ishiwari, R., see Sakamoto, N. B69 (1992) 84

Jakas, M.M., Wake effects on the center of mass of dissociated molecules traversing thin solid films B69 (1992) 142
Jakšić, M., see Valković, O. B69 (1992) 479
Janev, R.K., see Thomas, E.W. B69 (1992) 427
Jaouen, M., J. Mimault, P. Chartier, T. Girardeau and G. Tourillon, EXAFS study of the crystalline to amorphous phase transformation of Ni_xTi_{1-x} alloys induced by ion irradiation B69 (1992) 287
Johnston, P.N., S.P. Russo, R.C. Short, S.R. Walker and G.N. Pain, The development of an EDXRF technique for the determination of the stoichiometry and thickness of MOCVD grown epitaxial layers of $Hg_{1-x}Cd_xTe$ and a comparison with PIXE analysis B69 (1992) 361

Kabachnik, N.M., Dependence of electronic energy loss of light ions on the angle of emergence B69 (1992) 76
Kabachnik, N.M., see Trikalinos, Ch. B69 (1992) 94
Kanary, L.E., see Sawicka, B.D. B69 (1992) 365
Kaneko, T., see Moneta, M. B69 (1992) 146
Kaneko, Y., see Watanabe, N. B69 (1992) 385
Karpuzov, D.S., see Chakarov, I.R. B69 (1992) 193
Katayama, I., see Ogawa, H. B69 (1992) 108
Katkov, V.M., see Baier, V.N. B69 (1992) 258
Kelly, W.R., see Fassett, J.D. B69 (1992) 503
Kirilyuk, A.P., Theory of charged particle scattering in crystals by the generalized optical potential method .. B69 (1992) 200
Kirsch, R., see Ray, E. B69 (1992) 133
Kleyn, A.W., see Heeren, R.M.A. B69 (1992) 389
Kobayashi, N., see Watanabe, N. B69 (1992) 385
Köhn, O., see Henschel, H. B69 (1992) 307
Koponen, I. and M. Hautala, High energy ion beam mixing in dense collision cascades B69 (1992) 182
Koschar, P., see Rothard, H. B69 (1992) 154
Kostroun, V.O., see Assoufid, L. B69 (1992) 492
Kotov, V.I., see Chesnokov, Yu.A. B69 (1992) 247
Kotov, V.I., see Denisov, A.S. B69 (1992) 382
Kurihara, N., see Watanabe, N. B69 (1992) 385

Lagunas-Solar, M.C., Radionuclide production with > 70-MeV proton accelerators: current and future prospects B69 (1992) 452
Lane, D.W., The ion beam mixing of Ti and Cr films on silica glass B69 (1992) 281
Lee, E.H., see Lewis, M.B. B69 (1992) 341
Lennard, W.N., Xia Yueyuan and H. Geissel , Energy loss of heavy ions at nonzero emergence angles B69 (1992) 89
Letokhov, V.S., see Alkhazov, G.D. B69 (1992) 517
Lewis, M.B. and E.H. Lee, Chemical *G*-values of ion-irradiated polymers B69 (1992) 341
Linker, G., see Rauschenbach, B. B69 (1992) 277
Liu, H.-M. and T.-K. Wang, A modified method for void fraction determination in two-phase-flow systems employing photon-attenuation technique B69 (1992) 485
Louwerix, E., see Lövestam, N.E.G. B69 (1992) 463
Lövestam, N.E.G., E. Swietlicki, U. Wätjen, E. Louwerix, A. Perujo and P. Rietveld, The CBNM scanning nuclear microprobe analytical facility B69 (1992) 463

Majumdar, S., see Shriwastwa, B.B. B69 (1992) 370
Makarewicz, M., see Valković, O. B69 (1992) 479
Markowicz, A., see Valković, O. B69 (1992) 479
Massouras, G., see Miyagawa, S. B69 (1992) 437
Mathur, V.K., see Chakrabarti, K. B69 (1992) 322
Medin, J. and P. Andreo, Stopping powers for the ion-chamber dosimetry of radiotherapeutic heavy-particle beams B69 (1992) 64
Menapace, E., see Valković, O. B69 (1992) 479
Mertens, P., see Bauer, P. B69 (1992) 46
Meyer, O., see Rauschenbach, B. B69 (1992) 277

Mezilev, K.A., see Alkhazov, G.D. B69 (1992) 517
Mikkelsen, H.H., A note on the Barkas effect in gold B69 (1992) 22
Mikkelsen, H.H., see Ray, E. B69 (1992) 133
Mimault, J., see Jaouen, M. B69 (1992) 287
Mishin, V.I., see Alkhazov, G.D. B69 (1992) 517
Miyagawa, S., K. Saitoh, M. Ikeyama, G. Massouras and Y. Miyagawa, Composition and structure of zirconium implanted with nitrogen at high fluence B69 (1992) 437
Miyagawa, Y., see Miyagawa, S. B69 (1992) 437
Moneta, M., T. Gwizdałła, J. Czerbniak, L. Wojtczak and T. Kaneko, Wake potential of an ion in a solid B69 (1992) 146
Mordkovich, V.N., see Danilin, A.B. B69 (1992) 268
Morozov, S.N., see Vasiljeva, E.K. B69 (1992) 253
Mortensen, E.H., J. Oddershede and J.R. Sabin, Polarization propagator calculations of generalized oscillator strenghts and stopping cross sections of He B69 (1992) 24
Moschini, G., see Valković, O. B69 (1992) 479
Muñoz, R.C., D. Drijard, A. Ferrando and E. Torrente-Luján, On the application of the Onsager theory to the description of the free-ion yield observed in "warm liquids" irradiated by γ-rays B69 (1992) 293
Murphy, J.G., see Sawicka, B.D. B69 (1992) 365

Naim, M.A., see Hafez, A.F. B69 (1992) 373
Nardi, E., see Zinamon, Z. B69 (1992) 127
Närmann, A., H. Franke, K. Schmidt, A. Arnau and W. Heiland, Scattering of H at Ni surfaces: charge exchange and energy loss B69 (1992) 158
Novikov, Yu.N., see Alkhazov, G.D. B69 (1992) 517

Oddershede, J., see Mortensen, E.H. B69 (1992) 24
Ogawa, H., see Sakamoto, N. B69 (1992) 84
Ogawa, H., I. Katayama, I. Sugai, Y. Haruyama, A. Aoki, M. Tosaki, F. Fukuzawa, K. Yoshida and H. Ikegami, Charge state dependent energy loss of light ions B69 (1992) 108

Pain, G.N., see Johnston, P.N. B69 (1992) 361
Panteleyev, V.N., see Alkhazov, G.D. B69 (1992) 517
Peñalba, M., see Arnau, A. B69 (1992) 102
Penina, N.M., see Erchak, D.P. B69 (1992) 271
Penina, N.M., see Erchak, D.P. B69 (1992) 443
Perujo, A., see Lövestam, N.E.G. B69 (1992) 463
Platanov, Yu.P., see Denisov, A.S. B69 (1992) 382
Poizat, J.C., see Ray, E. B69 (1992) 133
Popov, A.V., see Alkhazov, G.D. B69 (1992) 517
Porter, L.E., Bethe–Bloch stopping power parameters for He, Ne, Ar, Kr, and Xe B69 (1992) 39
Posselt, M., see Rauschenbach, B. B69 (1992) 277

Rauschenbach, B., M. Posselt, R. Grötschel, E. Brecht, G. Linker and O. Meyer, Ion mixing of Cu/Ti and Cu/Fe bilayers B69 (1992) 277
Ray, E., R. Kirsch, H.H. Mikkelsen, J.C. Poizat and J. Remillieux, Slowing down of hydrogen clusters in thin foils B69 (1992) 133
Remillieux, J., see Ray, E. B69 (1992) 133
Rietveld, P., see Lövestam, N.E.G. B69 (1992) 463
Rösler, M., On the relation between stopping power and electron yield for proton impact on aluminum B69 (1992) 150
Rössler, W., see Bauer, P. B69 (1992) 46
Rothard, H., J. Schou, P. Koschar and K.-O. Groeneveld, Electron yields from solids: a probe for the stopping power of swift charged particles? B69 (1992) 154
Russo, S.P., see Johnston, P.N. B69 (1992) 361

Sabin, J.R., see Mortensen, E.H. B69 (1992) 24
Saitoh, K., see Miyagawa, S. B69 (1992) 437
Sakamoto, N., H. Ogawa, N. Shiomi-Tsuda and R. Ishiwari, Geometrical effect on the measurement of stopping power: angle-dependent energy loss of 5 MeV protons in Cu B69 (1992) 84
Santry, D.C. and R.D. Werner, Measured stopping powers of ^{16}O and ^{19}F ions in thin elemental films B69 (1992) 167
Sawicka, B.D., J.G. Murphy, F. Taheri and L.E. Kanary, γ-ray CT examination of density gradients in slip cast ceramics: correlation with stress distribution B69 (1992) 365
Schetkovsky, A.I., see Denisov, A.S. B69 (1992) 382

Schiwietz, G. and P.L. Grande, Electronic stopping of protons at intermediate velocities B69 (1992) 10
Schmidt, H.U., see Henschel, H. B69 (1992) 307
Schmidt, K., see Närmann, A. B69 (1992) 158
Schou, J., see Rothard, H. B69 (1992) 154
Schramm, R. and H.-D. Betz, Problems concerning the effective charge of swift heavy ions traversing gaseous and solid targets B69 (1992) 123
Semrad, D., see Golser, R. B69 (1992) 18
Semrad, D., see Eppacher, Ch. B69 (1992) 33
Sharma, J., see Chakrabarti, K. B69 (1992) 322
Shiomi-Tsuda, N., see Sakamoto, N. B69 (1992) 84
Shiromaru, H., see Watanabe, N. B69 (1992) 385
Short, R.C., see Johnston, P.N. B69 (1992) 361
Shriwastwa, B.B., S. Majumdar and J.K. Ghosh , Use of alpha autoradiography for quantitative estimation of ThO_2 and UO_2 content in sintered ThO_2–UO_2 mixed pellets B69 (1992) 370
Shul'ga, V.I., see Trikalinos, Ch. B69 (1992) 94
Sigmund, P., Statistical theory of charged-particle stopping and straggling in the presence of charge exchange B69 (1992) 113
Silva, H., The effect of gamma spectrum on thermoluminescent dosimeter response B69 (1992) 315
Skorobogatov, V.V., see Denisov, A.S. B69 (1992) 382
Smirnov, A.I., see Denisov, A.S. B69 (1992) 382
Smith, J., see Thomas, E.W. B69 (1992) 427
Soszka, W., Multiple scattering of low energy ions from a cold nickel target covered by rare gases: origin of the ion background B69 (1992) 242
Stelmakh, V.F., see Erchak, D.P. B69 (1992) 271
Stelmakh, V.F., see Erchak, D.P. B69 (1992) 443
Strakhovenko, V.M., see Baier, V.N. B69 (1992) 258
Sudentas, E.P., see Alkhazov, G.D. B69 (1992) 517
Sugai, I., see Ogawa, H. B69 (1992) 108
Swietlicki, E., see Lövestam, N.E.G. B69 (1992) 463

Taheri, F., see Sawicka, B.D. B69 (1992) 365
Tandon, P.N., see Tribedi, L.C. B69 (1992) 178
Tansley, T.L., see Alexiev, D. B69 (1992) 510
Taylor, R.B., see Guy, L.P. B69 (1992) 174
Thomas, E.W., R.K. Janev and J. Smith, Scaling of particle reflection coefficients B69 (1992) 427
Thwaites, D.I., Departures from Bragg's rule of stopping power additivity for ions in dosimetric and related materials B69 (1992) 53
Todorov, S.S., see Chakarov, I.R. B69 (1992) 193
Tolstykh, V.P., see Erchak, D.P. B69 (1992) 443
Torrente-Luján, E., see Muñoz, R.C. B69 (1992) 293
Tosaki, M., see Ogawa, H. B69 (1992) 108
Tourillon, G., see Jaouen, M. B69 (1992) 287
Tribedi, L.C. and P.N. Tandon, Efficiency determination of a Si(Li) X-ray detector in the energy range 1–20 keV B69 (1992) 178
Trikalinos, Ch., L.L. Balashova, N.M. Kabachnik and V.I. Shul'ga, Energy loss of axially channeled antiprotons B69 (1992) 94
Tsarik, S.V., see Chesnokov, Yu.A. B69 (1992) 247
Tsarik, S.V., see Denisov, A.S. B69 (1992) 382

Ulyashin, A.G., see Erchak, D.P. B69 (1992) 271
Urbassek, H.M., see Gades, H. B69 (1992) 232
Urbassek, H.M. and U. Conrad, Collision cascades in binary media: Analytical results for power-law cross sections B69 (1992) 413

Valković, O., M. Jakšić, A. Caridi, E. Cereda, A.M.I. Haque, R. Cherubini, G. Moschini, E. Menapace, A. Markowicz, M. Makarewicz and V. Valković, X-ray and gamma spectroscopy of coal and coal ash samples B69 (1992) 479
Valković, V., see Valković, O. B69 (1992) 479
Varichenko, V.S., see Erchak, D.P. B69 (1992) 271
Varichenko, V.S., see Erchak, D.P. B69 (1992) 443

Vasiljeva, E.K. and S.N. Morozov, Comparison of the excitation of rare-earth metals in sputtering, ion– and electron–atom collisions B69 (1992) 253
Vedeneyev, D.S., see Alkhazov, G.D. B69 (1992) 517
Vlasov, A.A., see Blokhin, S.M. B69 (1992) 474

Walker, J.K., see Gaynor, J. B69 (1992) 332
Walker, S.R., see Johnston, P.N. B69 (1992) 361
Wang, T.-K., see Liu, H.-M. B69 (1992) 485
Watanabe, N., H. Shiromaru, N. Kurihara, Y. Achiba, N. Kobayashi, Y. Kaneko and J. Yoda, Simultaneous storage of hetero-charged carbon cluster ions in an RF trap B69 (1992) 385
Wätjen, U., see Lövestam, N.E.G. B69 (1992) 463
Werner, R.D., see Santry, D.C. B69 (1992) 167
Whittingham, I.B., see Guy, L.P. B69 (1992) 174
Wojtczak, L., see Moneta, M. B69 (1992) 146

Xia Yueyuan, see Lennard, W.N. B69 (1992) 89

Yagura, S., see Heeren, R.M.A. B69 (1992) 389
Yoda, J., see Watanabe, N. B69 (1992) 385
Yoshida, K., see Ogawa, H. B69 (1992) 108

Zaitsev, A.M., see Erchak, D.P. B69 (1992) 271
Zaitsev, A.M., see Erchak, D.P. B69 (1992) 443
Zapolsky, V.N., see Chesnokov, Yu.A. B69 (1992) 247
Zapolsky, V.N., see Denisov, A.S. B69 (1992) 382
Zinamon, Z., E. Nardi and M. Hass, Charge state fluctuations and energy loss straggling of fast ions in cold and in plasma targets B69 (1992) 127
Zyuzikov, A.D., see Alkhazov, G.D. B69 (1992) 517

Nuclear Instruments and Methods in Physics Research B69 (1992) 531–533
North-Holland

NIM B
Beam Interactions with Materials & Atoms

Subject index

Basic data for materials modification and analysis

Compilation, measurements and tabulation of heavy ion stopping data, Bimbot, R. B69 (1991) 1
Electronic stopping of protons at intermediate velocities, Schiwietz, G. and P.L. Grande B69 (1991) 10
Energy loss of hydrogen and helium ions in hydrogen and helium gas: looking for exceptions from velocity proportionality, Golser, R. and D. Semrad B69 (1991) 18
A note on the Barkas effect in gold, Mikkelsen, H.H. B69 (1991) 22
Polarization propagator calculations of generalized oscillator strenghts and stopping cross sections of He, Mortensen, E.H., J. Oddershede and J.R. Sabin B69 (1991) 24
Dependence of proton and helium energy loss in solids upon plasma properties, Eppacher, Ch. and D. Semrad B69 (1991) 33
Bethe–Bloch stopping power parameters for He, Ne, Ar, Kr, and Xe, Porter, L.E. B69 (1991) 39
Stopping of hydrogen ions in oxides: influence of the chemical bond, Bauer, P., W. Rössler and P. Mertens ... B69 (1991) 46
Departures from Bragg's rule of stopping power additivity for ions in dosimetric and related materials, Thwaites, D.I. B69 (1991) 53
Stopping powers for the ion-chamber dosimetry of radiotherapeutic heavy-particle beams, Medin, J. and P. Andreo B69 (1991) 64
Dependence of electronic energy loss of light ions on the angle of emergence, Kabachnik, N.M. B69 (1991) 76
Geometrical effect on the measurement of stopping power: angle-dependent energy loss of 5 MeV protons in Cu, Sakamoto, N., H. Ogawa, N. Shiomi-Tsuda and R. Ishiwari B69 (1991) 84
Energy loss of heavy ions at nonzero emergence angles, Lennard, W.N., Xia Yueyuan and H. Geissel B69 (1991) 89
Energy loss of axially channeled antiprotons, Trikalinos, Ch., L.L. Balashova, N.M. Kabachnik and V.I. Shul'ga B69 (1991) 94
A charge state approach to the stopping power of ions in solids, Arnau, A., M. Peñalba, P.M. Echenique and F. Flores B69 (1991) 102
Charge state dependent energy loss of light ions, Ogawa, H., I. Katayama, I. Sugai, Y. Haruyama, A. Aoki, M. Tosaki, F. Fukuzawa, K. Yoshida and H. Ikegami B69 (1991) 108
Statistical theory of charged-particle stopping and straggling in the presence of charge exchange, Sigmund, P. . B69 (1991) 113
Problems concerning the effective charge of swift heavy ions traversing gaseous and solid targets, Schramm, R. and H.-D. Betz B69 (1991) 123
Charge state fluctuations and energy loss straggling of fast ions in cold and in plasma targets, Zinamon, Z., E. Nardi and M. Hass B69 (1991) 127
Slowing down of hydrogen clusters in thin foils, Ray, E., R. Kirsch, H.H. Mikkelsen, J.C. Poizat and J. Remillieux B69 (1991) 133
Wake effects on the center of mass of dissociated molecules traversing thin solid films, Jakas, M.M. B69 (1991) 142
Wake potential of an ion in a solid, Moneta, M., T. Gwizdałła, J. Czerbniak, L. Wojtczak and T. Kaneko B69 (1991) 146
On the relation between stopping power and electron yield for proton impact on aluminum, Rösler, M. B69 (1991) 150
Electron yields from solids: a probe for the stopping power of swift charged particles?, Rothard, H., J. Schou, P. Koschar and K.-O. Groeneveld B69 (1991) 154
Scattering of H at Ni surfaces: charge exchange and energy loss, Närmann, A., H. Franke, K. Schmidt, A. Arnau and W. Heiland B69 (1991) 158
Measured stopping powers of ^{16}O and ^{19}F ions in thin elemental films, Santry, D.C. and R.D. Werner B69 (1991) 167
Incoherent scattering function at small momentum transfers, Guy, L.P., R.B. Taylor and I.B. Whittingham ... B69 (1991) 174
Efficiency determination of a Si(Li) X-ray detector in the energy range 1–20 keV, Tribedi, L.C. and P.N. Tandon B69 (1991) 178
Theoretical upper and lower limits to experimental X-ray attenuation coefficients, Gerward, L. B69 (1991) 407

Atomic collisions in solids

High energy ion beam mixing in dense collision cascades, Koponen, I. and M. Hautala B69 (1991) 182
Dynamic Monte-Carlo simulation of compositional change and atomic redistribution in multicomponent targets under ion bombardment, Chakarov, I.R., S.S. Todorov and D.S. Karpuzov B69 (1991) 193

0168-583X/92/$05.00 © 1992 – Elsevier Science Publishers B.V. All rights reserved

Theory of charged particle scattering in crystals by the generalized optical potential method, Kirilyuk, A.P. . . . B69 (1991) 200
Pair versus many-body potentials in atomic emission processes from a Cu surface, Gades, H. and H.M. Urbassek . . . B69 (1991) 232
Multiple scattering of low energy ions from a cold nickel target covered by rare gases: origin of the ion background, Soszka, W. . . . B69 (1991) 242
70 GeV proton volume capture into channeling mode with a bent Si single crystal, Chesnokov, Yu.A., N.A. Galyaev, V.I. Kotov, S.V. Tsarik and V.N. Zapolsky . . . B69 (1991) 247
Comparison of the excitation of rare-earth metals in sputtering, ion– and electron–atom collisions, Vasiljeva, E.K. and S.N. Morozov . . . B69 (1991) 253
Hard proton emission from high energy electrons and positrons in single crystals, Baier, V.N., V.M. Katkov and V.M. Strakhovenko . . . B69 (1991) 258
Collision cascades in binary media: Analytical results for power-law cross sections, Urbassek, H.M. and U. Conrad . . . B69 (1991) 413
Scaling of particle reflection coefficients, Thomas, E.W., R.K. Janev and J. Smith . . . B69 (1991) 427

Ion beam modification of materials

Athermal nature of impact exerted by ultraviolet radiation on the accumulation of radiation defects during ion implantation into silicon, Danilin, A.B., Yu.N. Erokhin, V.N. Mordkovich, N. Hatzopoulos and P.L.F. Hemment . . . B69 (1991) 268
Hydrogen passivation of the paramagnetic centers in amorphous regions of ion-implanted diamond, Erchak, D.P., A.G. Ulyashin, R.B. Gelfand, N.M. Penina, A.M. Zaitsev, V.S. Varichenko, V.G. Efimov and V.F. Stelmakh . . . B69 (1991) 271
Ion mixing of Cu/Ti and Cu/Fe bilayers, Rauschenbach, B., M. Posselt, R. Grötschel, E. Brecht, G. Linker and O. Meyer . . . B69 (1991) 277
The ion beam mixing of Ti and Cr films on silica glass, Lane, D.W. . . . B69 (1991) 281
EXAFS study of the crystalline to amorphous phase transformation of Ni_xTi_{1-x} alloys induced by ion irradiation, Jaouen, M., J. Mimault, P. Chartier, T. Girardeau and G. Tourillon . . . B69 (1991) 287
Composition and structure of zirconium implanted with nitrogen at high fluence, Miyagawa, S., K. Saitoh, M. Ikeyama, G. Massouras and Y. Miyagawa . . . B69 (1991) 437

Effects of radiation

On the application of the Onsager theory to the description of the free-ion yield observed in "warm liquids" irradiated by γ-rays, Muñoz, R.C., D. Drijard, A. Ferrando and E. Torrente-Luján . . . B69 (1991) 293
Optical fibres as radiation dosimeters, Henschel, H., O. Köhn and H.U. Schmidt . . . B69 (1991) 307
The effect of gamma spectrum on thermoluminescent dosimeter response, Silva, H. . . . B69 (1991) 315
X-ray photoelectron spectroscopy, optical absorption and thermoluminescence studies in $CaSO_4$:Tm, Chakrabarti, K., J. Sharma, V.K. Mathur and R.J. Abbundi . . . B69 (1991) 322
Study of optical and electrophysical characteristics of cerium-containing glasses, Alimov, R., R.R. Gulamova and E.M. Gasanov . . . B69 (1991) 327
Miscible blends of fluorocarbon copolymer with acrylic copolymer and poly(vinyl acetate), PVAc: new alternatives to low refractive index cladding materials, Gaynor, J., V. Fischer, J.K. Walker and J.P. Harmon . . . B69 (1991) 332
Chemical *G*-values of ion-irradiated polymers, Lewis, M.B. and E.H. Lee . . . B69 (1991) 341
Peculiarities of damage in diamond irradiated by high energy ions, Erchak, D.P., V.G. Efimov, A.M. Zaitsev, V.F. Stelmakh, N.M. Penina, V.S. Varichenko and V.P. Tolstykh . . . B69 (1991) 443
Radionuclide production with > 70-MeV proton accelerators: current and future prospects, Lagunas-Solar, M.C. . . . B69 (1991) 452

Analysis of materials

Screened Rutherford multiple scattering estimates for heavy ion backscattering applications, Brice, D.K. . . . B69 (1991) 349
The development of an EDXRF technique for the determination of the stoichiometry and thickness of MOCVD grown epitaxial layers of $Hg_{1-x}Cd_xTe$ and a comparison with PIXE analysis, Johnston, P.N., S.P. Russo, R.C. Short, S.R. Walker and G.N. Pain . . . B69 (1991) 361
γ-ray CT examination of density gradients in slip cast ceramics: correlation with stress distribution, Sawicka, B.D., J.G. Murphy, F. Taheri and L.E. Kanary . . . B69 (1991) 365
Use of alpha autoradiography for quantitative estimation of ThO_2 and UO_2 content in sintered ThO_2–UO_2 mixed pellets, Shriwastwa, B.B., S. Majumdar and J.K. Ghosh . . . B69 (1991) 370

Plastic nuclear track detection methods for estimation of thorium to uranium ratio in thick natural materials, Hafez, A.F. and M.A. Naim B69 (1991) 373
The CBNM scanning nuclear microprobe analytical facility, Lövestam, N.E.G., E. Swietlicki, U. Wätjen, E. Louwerix, A. Perujo and P. Rietveld B69 (1991) 463
Restoration of depth profiles of impurity atoms in solids based on yields of ion-excited X-rays, Blokhin, S.M., A.A. Vlasov and O.A. Baschenko B69 (1991) 474
X-ray and gamma spectroscopy of coal and coal ash samples, Valković, O., M. Jakšić, A. Caridi, E. Cereda, A.M.I. Haque, R. Cherubini, G. Moschini, E. Menapace, A. Markowicz, M. Makarewicz and V. Valković . B69 (1991) 479
A modified method for void fraction determination in two-phase-flow systems employing photon-attenuation technique, Liu, H.-M. and T.-K. Wang B69 (1991) 485

Experimental methods and equipment

First results from a study of a 70 GeV proton beam being focused by a bent crystal, Denisov, A.S., O.L. Fedin, M.A. Gordeeva, M.P. Gur'ev, Yu.P. Platanov, A.I. Schetkovsky, V.V. Skorobogatov, A.I. Smirnov, V.I. Baranov, Yu.A. Chesnokov, V.V. Dudenko, N.A. Galyaev, V.I. Kotov, S.V. Tsarik and V.N. Zapolsky B69 (1991) 382
Simultaneous storage of hetero-charged carbon cluster ions in an RF trap, Watanabe, N., H. Shiromaru, N. Kurihara, Y. Achiba, N. Kobayashi, Y. Kaneko and J. Yoda B69 (1991) 385
Sputtering of a hydrogenated barium surface in a negative ion surface conversion source, Heeren, R.M.A., D. Ćirić, S. Yagura, H.J. Hopman and A.W. Kleyn B69 (1991) 389
External ion injection into an electron beam ion source, Assoufid, L. and V.O. Kostroun B69 (1991) 492
Determination of uranium and thorium in materials associated with real time electronic solar neutrino detectors, Fassett, J.D. and W.R. Kelly B69 (1991) 503
Neutron transmutation doping of silicon for the production of radiation detectors, Alexiev, D., K.S.A. Butcher and T.L. Tansley B69 (1991) 510
A new highly efficient method of atomic spectroscopy for nuclides far from stability, Alkhazov, G.D., A.E. Barzakh, V.P. Denisov, K.A. Mezilev, Yu.N. Novikov, V.N. Panteleyev, A.V. Popov, E.P. Sudentas, V.S. Letokhov, V.I. Mishin, V.N. Fedoseyev, S.V. Andreyev, D.S. Vedeneyev and A.D. Zyuzikov B69 (1991) 517